

## ABSTRACT

A low carbon metal-core weld wires for gas shielded welding operations having a low carbon steel sheath with a carbon content not more than approximately 0.008 % C. A metal-core composition of the weld wire has little and preferably no fluxing agents, so that the weld deposit produced thereby has no more than occasional slag islands formed thereon. The metal-core composition may have carbon added thereto to improve the mechanical properties of weld deposit produced thereby, and the metal-core composition is between approximately 16 % and approximately 20 % of a total weight of the metal-core weld wire. The low carbon metal-core weld wire has a relatively low fume generation rate and produces weld deposits with excellent mechanical properties.